

THE AMERICAN FARMER

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The Royal Agricultural Show in England.

Messrs. Editors *American Farmer*:

I know you and your readers would be pleased to hear of the great Agricultural Show held annually in England, and this year in particular in Shrewsbury, and venture, though not quite up to the form of reporting, to give you my impressions together with some statistics, which it is needless to say I obtained from another party.

The show, as all farmers know, brings together the best of the whole United Kingdom in the way of cattle and sheep, and the agricultural implements of course are American.

One year here is very like another, and perfection in detail is chiefly characteristic. The town is gay with decorations and battle-mented arches, and the whole way from the station to the show yard is festooned with bunting and flags, and all manner of beautiful decorations. This show is for the whole nation what the Oriole is to Baltimore.

The show grounds are about one mile from the station, and you cross on your way the river Severn by means of a pontoon bridge, begun on Friday and finished on Saturday by a body of Royal Engineers, sent expressly to facilitate the public by this short cut. A curious feature was a sermon preached on Sunday by the Bishop of Litchfield to about 1000 herders, cattle men and visitors in a large tent, from the text "How much better is a man than a sheep," and the stillness that prevailed for over one hour testified most amply to the interest felt by, and the understanding of, such a large congregation, and one, too, made of such heterogeneous material.

The space required covers 72 acres; the number of entries, horses, cattle, sheep and pigs is 1687. The prizes given by the Society, breeders, other associations, and individuals, large landed proprietors and others, amount to nearly \$35,000. Think of this, ye agriculturists. There are 343 individual exhibitors of machinery; chiefly of course, American machines, and a most wonderful display it is. There has been nothing at home to equal such an exhibition of everything a farmer could or would possibly use and these people, slow as they are, as compared to ourselves in most things, grasp at anything they see is good, and give handsome prizes to "encourage the others."

The town is full, no place to sleep. I myself am quartered at Stafford, 40 miles away, but easily reach the show by a fast train each day in 50 minutes. I find lots of farmers going to and from the show, and get into conversation with them on each trip. We have many arguments for and against our country, but always in the pleasantest way, and I find them to be secret admirers, though openly they cling to their old prejudices, and why should't they? when you reflect that many of them have worked, lived and will die upon the same farm, and in the same farmhouse that their ancestors occupied for 500 years. Of course their system and ours are in no way similar; climate arranges all that, and their love for their homes and modes after so many years is scarcely to be wondered at. Like all who

pursue the noble calling of husbandmen, some are up and some are down, *most are down*; but we have just such proportions at home, and do not our people cry out against the competition from the west and north-west just as vehemently as these people protest against the increased advantages our own land has over theirs. So I quietly forgive them and change the conversation. I fear my "remarks" are hardly what your readers will care for, and so skip to an account of the show.

Situated distant only about one mile from the old semi-Welsh town of Shrewsbury in Shropshire is the race course, and upon this spot with additions the great show was planted. The grounds were full all the time, though not crowded. 15,000 people paid 2s. 6d. or about 63¢ cents per head upon this day. The system, order and regularity were simply wonderful. The visitor, let him be ever so curious or inquisitive, could see everything and yet feel that he had elbow room. The machinery I need hardly review, except to say that there were many implements there of no use whatever in our land, and some that were useless here, a not unusual feature in agricultural shows. The farm wagons, country carriages, seeds, dairy and ornamental displays, were by no means inappropriate to our land, and with our advanced civilization, and yet far ahead of anything we could exhibit. At last he comes to the cattle, I hear a reader say, alas, I fear I shall disappoint him. Of course it must be remembered that this show is in the very heart of the sheep and cattle country, and the display of Herefords and Shropshires, as they exceeded in numbers, should have excelled, as it was upon their own "dung hills." I am free to admit that I have seen as good Herefords from John Merryman's Hayfield herd, and as good Shropshires from both Col. Lloyd's and Dr. De Courcy's flocks, as anything I saw at Shrewsbury. 'Tis true, the cattle was better cared for in the stalls; the stalls were more roomy, better opened to the public in not standing in two rows, head to head, and had such attractive features as ribbons and plaits and colors; it is also true that the sheep were "penned" in more attractive shape, were evenly "clipped," and colored to have an even surface where hollows or bumps might be seen; in fact, the "art of exhibiting" was clearly demonstrated, but no better stock did I see, and in the case of the sheep not of such excellent mutton and wool qualities as I have seen at home. The Shorthorn exhibit, though demonstrating the finest blood in England was confessed to be poor. The Jerseys were very inferior, the grades hardly worth mentioning. The Red Polled cattle were few but beautiful, small though; and to my mind, way behind Mr. Whitridge's Black Polled cattle in size, quality and general appearance. I say nothing as to the future of the horned or no-horned cattle; let each owner and breeder fight his own battle. But the horses! Ah, there is where they get us; such animals I have never seen, from the enormous Shire or Clydesdale to the tiny Welsh pony.

The order, system and regularity with which each class was collected, put in a "collecting ring," and then paraded in the large ring, first at a walk, then at a trot or gallop, in a narrower circle than we use, and one more easily enjoyed by the spectators was especially commendable. The light drafts, hunters and hacks were a sight to gladden one's eyes, and make a most pleasant spectacle finely fixed in one's memory. Class after class paraded each day, so that even the late comers had a chance to observe and learn. The sides of the ring were crowded five and six deep, and each class with its 1st, 2d and "highly commended," was freely, fully and intelligently commented upon. It was a most wonderful sight, and I heartily wished for many I knew at home, who were as well "up to" what they saw as were those who were around me, to be present and enjoy the sight. The weather was all that could be wished for, and slowly I wended my way from the show with, I confess, a greedy wish and desire that I or others at home could possess many a beautiful object I saw.

BALTIMORE COUNTY.
Shrewsbury, Shropshire, Eng., July 16, '84.

I enclose you here a printed account of a silo. I don't know whether or not any of our people have seen or heard of one of such a character.

"Among the other features of the show we should state that the French silo system is shown by what is termed a "paddock silo," which is exhibited by Messrs. Lascelles, of London, and which is said to be similar to that adopted by Viscount Chexelles. This consists of a wooden framework, which is first erected, and to this are screwed slabs of concrete, made of furnace slag, and impervious to damp. The joints of the slabs are filled with felt, so as to make it as airtight as possible. The silo was completed about three weeks ago, and filled with freshly-cut green fodder. We may say that the framework of the silo rests on the ground, and is about 12ft. high; it is therefore obvious that there would be an advantage in sinking it about 3ft. in the ground (and we understand this is usually done), as there would not be so much labor expended in pitching the grass from the wagon into the silo. About 6in. of sand was spread evenly at the bottom of the silo, levelled and trodden down by the men. Any ordinary earth would answer as well. The grass having been drawn alongside it was pitched in by the men, one man being employed inside levelling the grass. The proceedings of filling being completed, a thick layer of sand or earth was placed on the top, and then the whole was covered by a novel sliding roof, and left until the show. It is intended to open the silo during the week. One of the notable features of this special experiment will be that all expensive mechanical contrivances for producing pressure are avoided, and that the only means of compression used is that of putting a good depth of earth on the top, which any farmer in any place can supply for the simple expense of shovelling and levelling."

Agricultural Matters in France.

CROPS AND WEATHER.—In the south of France the harvest is all but terminated, and operations are rapidly extending northwards. The yield is excellent as regards wheat; the ears are well filled; the straw is short; perhaps over the whole of the country the returns will exceed a good average. Then the quality is largely counted on. The intense heat has largely contributed to hasten the ripening of the grain earlier than usual. The rye crop has in several regions been laid; this is very unfortunate, as it is generally rye straw that is employed as bands for the sheaves. Wire and cord are not in favor; they get awkward, at threshing time occasionally. Oats and barley have suffered from the drought, and more severely where the sowings have been made in the spring. In mountainous districts, or humid regions, close to the sea shore, this drawback has not been experienced; on the other hand, maize promises to be a splendid crop; the same observations apply to the cultivation of rape for oil.

The dry weather is telling on root crops; potato tubers are small and not numerous; turnips parched. All fodder will be short, save where the land has not been exposed to the scorching heats. Vineyards are most promising, and despite the sinister rumors circulated in spring as to the effects of frosts, the vintage will be good in quality as well as quantity.

THE VARIOUS REGIONAL AGRICULTURAL SHOWS, about sixteen, come off annually, under the auspices of the government, have been held. The results are considered as satisfactory, both as regards stock and products. Perhaps some reserve must be made under the head of instruments. Since the prize list for agricultural implements has been growing small by degrees and beautifully less, manufacturers find but little inducement to exhibit, and none for new inventions. The innovation of awarding premiums to the best cultivated small farms and gardens, has worked well. The only point to be deplored, connected with these government departmental shows is the inroads made by industries, that only the most charitable stretching of imagination can connect either with the science or practice of agriculture. An agricultural show ought to have distinct features from a local fair.

PASTEUR'S DISCOVERIES.—There was no doubt as to the efficacy of the Pasteur discovery, of vaccination of stock against the charbon disease. Experiments widely conducted on oxen, sheep and pigs, confirmed the value of vaccination as a preservative. But one point remained to be determined: how long did the efficacy of the vaccination last; it was no more permanent in the case of stock, than of small pox with human beings. Roughly, its preservative action was set down at six months. To test the point, the agricultural society of Herault experimented on three races of sheep peculiar to the south of France, of which one, the Larzac, yields the milk from which the famous Roquefort cheese is prepared. Thirty six sheep were set apart for experiment, and were installed at

the agricultural college of Montpellier. This was in May, 1883. In May, 1883, six sheep, chosen two by two, from the several breeds, were inoculated with the poisoned virus and resisted its action. In the following November the experiment was tried on another lot of six; same result, immunity. After the lapse of another six months, that is in May, 1884, six more animals were similarly treated, and with equally satisfactory results, whilst sheep that had not been vaccinated succumbed. Hence sheep vaccinated in 1883, resisted the virulent virus in May, 1884; that is to say, the immunity was assured for two years.

FARM-YARD MANURE.—Professor Heiden of Pommeritz, has devoted considerable attention to this subject. He draws attention to the fact, that while the employment of artificial manures annually augments, while amelioration takes place in the races of cattle, that food has become more concentrated for stock, and farm offices have been improved in construction, but little proportionate attention has been given to the conservation of farm yard manure, or to its treatment. In some out buildings the manure is only removed every week, or every month; some times less frequently. The manure is better carted directly to the field, or placed in a heap. The Professor inclines to view that the best manure is made by leaving the litter unchanged as long as possible, but on condition, that the urine or liquid manure be carefully economized.

Farm-yard manure when neglected, loses the greater part of its soluble matters, which are the most precious, and at the same time a notable proportion of nitrogen under the form of carbonate of ammonia. Farm-yard manure consists of excrements, urine, and litter. Urine decomposes the most rapidly: when fresh, the nitrogen exists under the form of urea and hippuric acid; there exists also, a small quantity in the ammonia and in the coloring principles of the urine. By the simple absorption of water, the urea is rapidly changed into carbonate of ammonia. The hippuric acid is not slow either in decomposing; urine collected after a space of two days, contains none; and in that time it loses about fifty per cent. of its nitrogen.

Having a well constructed liquid manure tank, the Professor urges the employment also of gypsum or kainit, and the form in which gypsum ought to be used is, as it comes as refuse in the fabrication of superphosphates and phosphates, that is to say, when coprolites are reduced to powder, acted upon by sulphuric acid, and a solution of lime. Now two per cent. of this gypsum will fix the volatile carbonate of ammonia. From one to three pounds, per head of stock per day, will suffice. Small farmers however, ought to take care, and not have their shed too warm, as that would, from a diminution of oxygen in that atmosphere, induce the formation of sulphuret of calcium, which generating sulphuretted hydrogen gases, would create a bad odor.

DESTROYING FIELD MICE.—In the neighborhood of Rouen, sulphuret of carbon is successfully employed to destroy field mice. A vessel capable of containing five quarts of the liquid, that which is employed also against the phylloxera, has a cock, with a protruding pipe arrangement: the latter is placed at the mouth of the mice-holes, and a simple turn of the cock empties a measured dose of the poison.

THE SUGAR INDUSTRY question is still being debated in the legislature. It is very complicated, as it is mixed up with the demands of colonial growers for protection, and of refiners for drawbacks. For the future, however, the vexed question of levying the duty will henceforth be on the roots, as in Germany, and not on the sugar-richness. A commission has been nominated to visit Germany and ascertain to what causes are due her superiority in the production of beet root.

Briefly, this may be ascribed to German farmers cultivating the root exclusively for its sugar; having small returns; to scientific processes on the part of fabricants being more perfected, and to great care in the selection of seeds and manures.

WHEAT FROM INDIA.—A good deal of wheat is now being imported from India, and more will certainly arrive as the tolls of Suez Canal are reduced. There is another product that might be studied, that of forage. This is generally insufficient in France, and there is ever a brisk demand for good hay. Half a century ago India exported compressed hay to France.

Shocking Wheat.

Messrs. Editors American Farmer:

We, in Southern Maryland, who grow largely of corn and tobacco, have sometimes to leave our wheat in the field a month or two after it is harvested. If we bound into sheaves and set it up in dozens, in such a rainy and stormy season as the present has proved to be, I imagine the wheat would all be wet and damaged. Most of our people put their wheat up differently; after cutting it with a reaper, it is picked up unbound, and shocked in shock from six to eight feet in diameter; the heads are pressed close together, and about a dozen armfuls left around the shock; then two experienced hands come along with an arm full of tobacco sticks, one of which is run partly down in the middle of the shock and answers in place of a stack pole; with the dozen armfuls left at each shock, a sharp pointed little stack is built up around these tobacco sticks, fully protecting the great mass of the heads of the former shock, and when brought to a sharp point a cap is put over the shock, and the tobacco stick through the cap. Put up in this way, my own wheat has remained uninjured in the field for six or seven weeks, although we have had floods of rain, and sometimes winds resembling a western cyclone. Of course, it is always wise to stack or house or thresh earlier than I have done, if one can. I merely relate our people's method, thinking it might interest some of your readers.

A FARMER.

Calvert Co., Md., August 6th, 1884.

Time and Method of Applying Manures and Fertilizers.

By B. PURYEAR, LL. D., Professor of Chemistry in Richmond College.

We believe that farmers are constantly sustaining heavy losses from the bad management of fertilizing material. Our domestic manures, the excrements of animals, are frequently exposed month after month to the action of sun and rain; no processes, either mechanical or chemical, are taken to prevent the escape of ammonia, or the carrying off in solution of the soluble constituents of the manure. In the construction of farm yards, care should be taken that the roofs of the buildings turn the water from, and not into the farm yard. Then, if the farm yard be level, or slightly basin shaped, there will seldom be an overflow of water. When, however, this does occur, it may be made, by easy contrivance, to flow into a water-tight tank, which should always contain absorbents in abundance. The contents of the tank may be hauled off, at suitable intervals, to the field, or thrown back upon the manure pile, as circumstances may suggest. Thus nothing is lost; the saving accomplished will soon repay the trouble and expense incurred.

The blackish water which has percolated through a manure pile, and flows off upon the surface, is charged, to saturation, with the soluble constituents of the manure. When we recall the fact that no solid, as a solid, can get into the circulation; so that all solids, to be available, must first be dissolved by water, we see at once that in this waste

of liquid manure, we are losing all those constituents that make manure valuable.

In saving animal manure, the admixture with it of vegetable matter and earth is always advisable. The fertilizing material is thus absorbed and retained, and the vegetation rots more thoroughly and promptly from its contact with animal matter.

The sprinkling of gypsum—calcium sulphate—over manure heaps and in the stalls of horses and cattle, is also advisable. The escape of the gas, ammonia, which is but little more than half as heavy as the atmosphere, and therefore is liable to rise into the air, is prevented by the formation of the sulphate of ammonia, which is solid, and therefore cannot escape in this way.

We believe, however, that animals' excrements should be hauled off as promptly as possible to the field, and turned under. Then all the chemical changes take place in the soil; which holds and assimilates the products of chemical action. We will give a single illustration of this remark: Ammonia, the form in which plants obtain their nitrogen chiefly—it being a compound of nitrogen and hydrogen—is always a product of the decomposition of putrescent manures. When formed in the soil, ammonia can never escape; its wonderful absorbability by water is the explanation. Water absorbs seven hundred times its volume of the gas, so that as fast as the gas is formed, the moisture of the soil absorbs and holds it for the use of growing vegetation.

We believe that, as a general rule, the best method of applying manure is to broadcast it. The argument that manure should be applied just where it is most accessible by the roots, is, in the main, fallacious; in the case of plants, as Irish potatoes, which must make very quickly, and whose roots do not ramify extensively through the soil, it may be best, particularly if the supply of manure is scant, to put it where it is most accessible, and most ready for immediate use. But for wheat, corn, tobacco and for all plants where we can fertilize heavily, broadcasting is the proper method.

Let us see: Tobacco, say, is fertilized in the hill; the plants are successfully set and are growing rapidly; the prospect for a large crop is highly flattering; every thing that the plant needs is about and among its roots, and with favorable seasons, the growth is rapid; but let a little drought come—how quickly the plants show that they cannot contend with the situation; the prospect so flattering awhile ago vanishes at once—why is this so? Plants, like animals, accommodate themselves to their environment. The plants, when set, found everything necessary for rapid growth abundantly about their roots; why should the roots spread out and strike down in quest of food, when without doing so they can get it abundantly? Like fast young men, like riotous livers, they have abundance at present, and reck not the day of coming trial. When, therefore, the crop is pinched by a little drought, it gives way at once; the roots are superficial, and confined also to smaller area; water does not fall to dissolve the fertilizer freely, and the plants not having made provision for getting supplies from a larger area and from greater depths, succumb at once. They have been pampered, and are unprepared to make a vigorous effort for life.

On the other hand, if the same amount of fertilizing material had been applied broadcast, and so had become thoroughly intermixed with, and assimilated, by the soil, the growth would have been more gradual, more healthful and better sustained; the plants would have had to root for their food, and would have rooted more extensively and more deeply; they would have had more and stronger means of obtaining food, and that, too, from depths and localities unvisited, in the former case, by their roots. What we have said about tobacco applies with equal

force to corn, wheat, cotton and other staple crops.

Again, the inadvisability of applying manure in the drill or hill may be illustrated in another way. If the supply is inadequate for the full demand of the plant, the result, even with good seasons, may be disastrous, for another reason. Let us again take tobacco to illustrate our point: the plants grow off promptly and rapidly, they are vigorous and strong; they feed upon and consume rapidly, the food placed immediately about their roots; but when this supply gives out, as is not unfrequently the case, before the maturity of the plant, then the plant is well nigh helpless; with an artificial supply of food placed right at hand, it has neglected to send out many roots, or any very deeply; this artificial supply failing, the plant is unprepared to get food from the soil at large. At best, at the very best, its growth must be checked while it is endeavoring to accommodate itself to the new situation. The easy and abundant source from which it has been drawing its food is exhausted; what now shall it do? It will either fail to meet the emergency, or at best, must be checked and injured in its growth and development, while it is seeking to change its tactics, and adjust itself to altered conditions.

We believe, also, that it is best to apply manures, whether putrescent or commercial, for spring or summer crops, in the preceding fall; let it have time for perfect assimilation by the soil, for the completion of the chemical changes that will occur upon its admixture with the soil.

Some fear that it will get out into the air; that it will be dissolved by the rains and carried away to the creeks and rivers. Not so; the earth is not constructed in so bungling a way; we may not so impeach the wisdom of the Supreme Architect; it is only when rains are excessive, and are more than sufficient to saturate the soil, that any runs off; but the rain that runs off is the surface rain that has not percolated through the soil, and therefore carries off but very slightly the soluble constituents of the soil; it has not struck through the soil; it has had no chance to dissolve, except to a small extent, the soluble constituents of the soil, for, confined to the surface, it has come in contact with them only to a very slight extent. Besides, who knows but that the soil, by a law of its own, unknown to existing science, may have the power of holding with special grip and tenacity, whatever is necessary to its own constitution? Such is the belief, at least, of a farmer who was talking with me a few days ago—a man of large experience and successful practice, distinguished by the accuracy of his observations, and the general correctness of his inductions.

Rearing Silk Worms.

The *Kansas Industrialist* says:—"The worms thrive on Osage Orange leaves nearly or quite as well as if they be fed on the White Mulberry. The eggs should be kept in a cool place—a cellar is good—until the young hedge leaves start; when, if they are brought into the temperature of an ordinary living room, the larva will soon appear. They are not inclined to travel, and may be kept on a pasteboard box lid, or even on a newspaper, from the time they come out small black worms, until they are two and one-half inches long, and are ready to open their cocoons. Lest refuse from their feeding should become mouldy and therefore damp, the worms must be placed upon new and clean paper. The young larva are extremely tender, and must be handled with the utmost care. They can, however, be successfully transferred by letting them become quite hungry, and supplying them with good, fresh leaves on the young branches; the worms will crawl upon these, and may be readily transferred. In no case should wet leaves be fed, whether from dew or rain; all drops of water should be shaken off the leaves.

Live Stock and Dairy.

A Practical Breeder's Opinion of Consanguineous Matings, etc.

Messrs. Editors American Farmer:

Glancing over your late issue, I notice the advertisement of Major W. W. Bentley's sale of Shorthorns and Southdown and Oxford sheep. I have received from Major Bentley a private letter not intended for publication, from which, however, I take the liberty of sending you an extract, setting forth the writer's views on a very important question, viz., the effects of in-and-in breeding. Major Bentley writes as follows: "Hogarth, the bull now at the head of my herd is, as you know, very closely inbred, yet he has unquestionably eclipsed every shorthorn ever seen in Virginia as a show animal, and has proven himself a superb sire; and here let me say that the more actual experience I have in breeding, the more clearly I am convinced of the correctness of your views on the question of inbreeding, viz., that no defects in constitution or form are ever produced by inbreeding, *per se*, but it exaggerates and increases existing predisposition and character, both desirable and undesirable. There can be no good breeding, no perpetuation of good and desirable qualities, no improvement, without more or less of this inbreeding so condemned by certain writers."

I desire to place on record this opinion of one so well qualified to speak upon a subject so much discussed, and having bearings so wide and so important; the more so, because Major Bentley does not give himself time to write much for the public press, and is pre-eminently what is called a practical man.

I, myself, suggested to him the cross which produced Hogarth, and having at that time control of the inbred Renick Rose of Sharon bull Raleigh, the sire of Hogarth, I offered him the means of carrying it into effect. He then expressed some doubts as to the breeding being too close, but carried it out nevertheless. It was precisely because the cross united similarly bred animals that I recommended it, knowing, as I did, that both animals were in all respects sound and of the very highest quality. I found then in Major Bentley's herd two illustrious cows bred by Abram Renick, and two young Marys bred by Van Meter, and two Josephines bred, I think, by the late Alex. Matthews of Wytheville. Upon these cows the celebrated Renick Rose of Sharon bull Joe Johnston had been largely used, as well as his inbred son Raleigh, out of Rosebud 8th; the bull above named is sire of Hogarth, and Major Bentley's own bull illustrious Airdrie, bred by Mr. Renick. In breeding the illustrious family, Mr. Renick used precisely the same bulls as he used upon his world-famous Rose of Sharon, and they are practically identical in blood for from five to seven or more crosses. For this very reason I urged the breeding of illustrious 5th to Raleigh, and I was not in the least surprised to find in Hogarth, when I judged him in his two year old form in the show ring at Richmond, the most finished Shorthorn I had ever seen. This animal represents the combination of the best results of Abram Renick's phenomenal skill as a breeder. I do not know whether he will be offered at the sale or not, but he can be seen there by all who attend, and I recommend him to the notice of all admirers of this grand breed of cattle. Having disclosed this much of the breeding of Major Bentley's cattle without consulting his wishes, I ought to add that it is within my knowledge that he has never had a barren cow in his herd, for the information of those of my readers who may be on the look out for such a result from close breeding. All the facts I have now given can be verified by addressing Major Bentley, whose

sale is advertised and address given in your journal.

Major Bentley is a graduate of the Virginia Military Institute at Lexington, a scientific school of the first rank, and the value of such training is illustrated in his exceptional success in a business so thoroughly scientific as the breeding of improved live stock. I believe it is true, that no breeder in this country has had greater success in the show ring for an equal number of animals bred and exhibited. For such reason his opinion upon the great question of the results of consanguineous intercrossing is of substantial value, and I desire to place it on record, not merely because it is confirmatory of my own position. The foundations of Major Bentley's herd were laid in the best blood, as combined by such notable shorthorn authorities as Alex. Matthews, Abram Renick and Ben Van Meter. His Southdowns were select specimens from the renowned flocks of Lord Walsingham and Jonas Webb. His Oxfordshiredown sheep from the flock of Mr. Druce. The animals bred by Major Bentley from these foundations are in all respects equal to the originals, and I take this opportunity to say to such of my readers as may attach any value to my opinion, that they have an exceptional opportunity to purchase some of the best bred animals in this country, and of the highest individual excellence, at the sale advertised in this issue of your journal.

M. G. ELLZEY, M. D.

Some Necessary Precautions in Sheep Raising—Brown Sedge.

Messrs. Editors American Farmer:

Most domestic animals are endowed with certain natural instincts which enable them to shun poisonous plants. Sheep are an exception to the rule. They seem to have but little or none of this kind of instinct, and are liable to eat and be killed by many of the poisonous plants that grow on our soils. They will eat Jamestown weed, May weed, ivy, mushrooms, and even tobacco. In view of this fact it is necessary that precautions should be taken to prevent their access to these plants as far as possible. Ordinarily when supplied with good pasturage, there is not much danger of their eating them, but when pasturage becomes scarce or when the ground is covered with snow, sheep will eat readily some of these poisonous plants.

The ivy is an evergreen, and in winter when green herbage is scarce, or when the ground is covered with snow, it is very tempting to the poor hungry sheep. It is a deadly poison, and if sheep happen to eat it, it is almost certain to kill them, unless speedily relieved. Hog's lard is the remedy, and an antidote for this poisonous plant, as it is also for tobacco.

To show the wonderful efficacy of hog's lard as an antidote for these poisonous plants, I would relate an incident in my own experience. When a boy living with my parents I was sent out one morning whilst the ground was covered with snow to see about the sheep. They were found near the ivy cliff, with about a dozen of them stretched out on the ground almost dead. I returned immediately to the house, where I provided myself with some hog's lard, and a chunk of fire, with an assistant, and returning to where the sheep were, we drenched them well with the melted lard, and then left them to their fate.

On returning to the place the next morning all the poisoned sheep were found up and well. I have relieved them in the same way when poisoned by tobacco.

Mushrooms will also kill sheep. They grow almost exclusively on forest land, and during wet spells they spring up in great numbers. Sheep are very fond of them, and they will eat them ravenously. I was not aware of this fact until a few years ago, and

if the reader please, I will relate how I made the discovery. About this time my sheep commenced dying and I lost several. On turning them out one morning into a woods pasture, I observed them running about in every direction and once in a while stopping to eat something, which I found to be the mushroom. It occurred to me at once that it was this mushroom that was killing the sheep. I immediately took them from this woods pasture and did not lose one of them afterwards. I have been careful ever since to keep them from running in the woods during wet spells. I tried hog's lard in these cases also, but it failed to give relief, and all died that were taken sick.

Acorns will also kill sheep, not, however, because they are poisonous, but because the hulls are so tough and indigestible that they clog up in the stomach and produce costiveness and colic. I made a *post mortem* examination of one of these cases, and found the stomach perfectly blocked up by these indigestible hulls. Acorns will sometimes kill cows in the same way. Indeed, all ruminating animals are liable to be killed by acorns, and it is dangerous to let them run in the woods during acorn season. The acorns are swallowed without mastication, and when the animal attempts to throw them back into the mouth for mastication, they are sometimes unable to do it, and constipation and colic ensue in consequence.

"An ounce of prevention is worth a pound of cure," and it is a great deal better to keep out of harm's way than to get out when once in. A little timely precaution and care on the part of the stock and sheep raiser will save him much loss and trouble. Although sheep can be raised with less cost and trouble than any other animal, it is a great mistake to suppose that they can be made profitable *without any*. They require a great deal of attention and care, though but little labor or cost. As a rule nothing prospers much without labor and attention, and sheep husbandry affords no exception to the rule, and when these are liberally and faithfully bestowed nothing pays better on the farm than sheep.

In this connection I will venture to call the attention of Eastern Virginia farmers to the great value and importance of the broom sedge grass. In the olden times this grass was regarded as a great pest, and one of the most interesting questions with the farmers of that day was how to get rid of it.

But really it is a good thing, and is one of those blessings which a beneficent Providence has provided to counteract the improvidence of man as well as to repair the "wear and tear" of the elements upon the earth's surface. It springs up readily upon the poorest soils here, and soon forms a sod to stop the washings of the soil, and at the same time furnishing excellent pasturage for stock. It is a healthy and nutritious grass, causing the cow to yield rich milk and yellow butter, and it is particularly efficacious in keeping sheep in a thrifty and healthy condition.

The cultivated grasses can not be made to grow on these impoverished soils without a considerable expenditure in seed and manure, but this grass comes voluntarily to meet our peculiar necessities "without money and price." It is said that this is no grass country, and yet here is a native grass that springs up without seeding or any preparation of the soil, on the poorest land—where it is most needed—and grows with a luxuriance almost approaching the marvelous. A stranger coming here at this season of the year will be astonished to find these cheap lands covered with a luxuriant growth of grass from six to twelve inches high. There are large quantities of such land in market here which may be bought at from \$3 to \$5 per acre, and which are capable of supporting millions of sheep and cattle. But the broom sedge grass in its effort to possess the land

has to encounter a formidable rival in the old field pine, and without the aid of the woodman's ax it is hardly equal to the contest. In order to secure a good growth of grass the pines must be kept under. Where the pines are not very thick the grass will grow more or less, but growing in the shade as it must necessarily do, amongst the pines, its value for grazing is very much diminished. All plants grown in the shade are more or less acid and watery, and stock will not eat it when they can get that grown in the sun. This grass, in its advanced stages of growth, however, becomes tough and hard, and is not then much relished by stock. It is only whilst young and tender that they delight in it. In order to get an early and tender bite of this grass in the spring, the old grass should be burned off, and the proper time for this is about the first of March.

In conclusion allow me to suggest to the owners of these old field lands, that they may be made to yield a handsome income by putting sheep on them. At present they are not merely yielding no income at all, but the money invested in them is dead capital, subject to high rates of taxation. But it is urged by some, it is too expensive keeping up the necessary fencing. But fencing here is not so expensive. Timber is generally plentiful and rails can be gotten for fifty cents per hundred, and fifteen or twenty cents per panel will cover the whole cost of an ordinary rail fence.

The greatest enemies of the sheep, however, are the dogs and the sheep stealers. As shown in a former article upon the subject, these drawbacks may be overcome by penning them near the homestead at night and putting bells on a few of them.

Cumberland Co., Va. WM. HOLMAN.

Scours in Calves.

Every season there is a good deal of complaint about scours in calves, and information is called for to know how to treat the affection. The best treatment consists in removing the cause, or causes, that produce it, the chief of which is indigestion. Calves which run with their dams, or which are fed new and warm milk, are seldom if ever troubled with scouring. It is when they are fed upon skim-milk—sour or sweet—or whey, or other food not natural to the young bovine—food good enough, perhaps, in quality, but given too cold—that this complaint mostly occurs.

The stomachs of no young animals will endure much chilling without creating serious disturbance, nor is chilling good for the stomachs of older ones. The stomachs of young ruminants are not only not as well fortified against the effects of cold foods as adults of that class, they are not even as well prepared to bear up against chilling as the stomachs of non-ruminants. In adult ruminants, the paunch, or rumen—the first and largest division of their huge compound stomachs—receives nearly all the cold foods, and drinks taken in by them. After being warmed up in this department and softened and remasticated, its contents go to the other division, which, always receiving them warm, never become accustomed to taking in cold materials. This is especially true with respect to the fourth division, or true stomach, it being necessary for the food to pass through all the others before reaching it, as it is the last division in the series. In the young ruminant, this fourth, or last division, is the only active part of its stomach. The other divisions, especially the paunch, exists in a somewhat rudimentary condition, and are, at first, inferior in size, and useless, and only come into activity by slowly developing, as life advances.

Cold food given to a young ruminant must, therefore, go where cold food was never intended to go—into a receptacle designed by Nature for the reception of warm material only. To force them to take cold

food before the other divisions are developed enough to at least share in the labor of warming it up. Is to war against Nature, which always demands a penalty for the infraction of her regulations, and the young ruminant pays it.—*Nat. Live-Stock Jour.*

How to Keep June Butter for Winter Use.

It is a fact well conceded by all good judges of butter, that butter made in June is better flavored than that made in any of the eleven other months. It is, therefore, very important that every one should know how to keep the June product for winter use. Here is one way:—Pack the butter solidly in stone crocks to within an inch of the top, level it, and cut a piece of muslin and spread it over the top; then fill to the top with common salt. Dig a hole in the ground on the north of some building, or in the shade of some tree, or if this is inconvenient, the garden will do; let it be deep enough, so that when the crock is covered, the earth on top of it will not be less than eighteen inches thick. In this hole place the crock; over it put something that will turn off the water if any leaches down to it. An old tin pan turned over makes a good cover. Pack on the earth, leaving it rounding, like an ant hill, to carry off the surface water. If this work is done in the garden, plant over the top a tomato vine, or a few beans, or anything to shade and keep away the torrid rays of the sun. The work is then finished, until one wishes to take out the butter any time before severe frost. This method I will warrant to keep butter perfectly sweet until winter, if proper care is taken. An old acquaintance of mine tells me he has practiced this plan for years, and when he lived on the farm he used to take up his butter in November, and sell it for forty cents per pound, whereas, if it had been disposed of when made, he could not have realized more than fifteen cents. This is also a good way to keep canned fruit during the summer, if one has not a proper place for the purpose. Put the cans in a box and bury it as the above, if canned in glass.

Another method is to pack the butter as before; then take a good sweet barrel (a pork barrel will be as good as anything if sweet), in it place the crocks as closely as possible, (small crocks will pack better than large ones), placing one on the top of the other until the barrel is nearly full; then make as strong a brine as salt will make; scald it, so as to skim off all impurities; when cold, fill up the barrel. If the head can be put in, and the brine turned through a hole in the head, all the better. Let it stand in the cellar or in any cool place until wanted, and take out one crock at a time as it is needed. This is a little more expensive way, but it answers every purpose. The brine will not salt the butter.—*Rural New Yorker.*

Poultry Yard.

Concerning Poultry Disease.

CAUSES.—With some things in life the effect is so far from the cause that we are often driven to our wits' end to find the connecting link, but where poultry diseases are concerned, cause and effect are not far apart. When disease first appears among a flock of fowls the poultry-keeper ought to at once ascertain and remove the cause, for it is almost useless to doctor sick fowls if the conditions which produced the disease are kept undisturbed.

FILTH in some form or other is the prime cause of some of the worst ills that afflict chicken flesh, and it surely aggravates all poultry diseases. This filth may be in the air, or it may be in the food and drink, but wherever it is, or in whatever form taken into the system, it will surely cause disease.

DAMPNESS is another direct cause of disease. It does not hurt fowls to run about in

the rain, provided they have a dry house to go to when they get tired of paddling about in the wet, but it does hurt them to roost in a house that is always damp. The poultry-raiser who keeps fowls in damp houses must expect to fight roup, canker, colds, sore eyes, diphtheria, gout, rheumatism, consumption.

ROOSTING IN DRAUGHTS is also responsible for many of the ills enumerated above. Fowls that roost in the tree-tops right through the winter never take cold; it is the current of air that comes through some crack or crevice and strikes the fowls while on the roost that causes the mischief.

STRANGE FOWLS sometimes introduce disease into a healthy flock. The careless poultry-keeper buys a breeding cock, or perhaps a few hens, and at once turns them loose among his old stock; in a short time there is an outbreak of roup or cholera, and "nobody knows where it came from."

LACK OF VIGOR on the part of the breeding cocks, or hens, or both, is one great cause of taking off many chicks and young fowls.

LICE often kills chicks outright, and while they may not actually kill older fowls, or even cause disease, it is quite certain that fowls whose vitality has been lowered by the loss of blood consequent upon the presence of lice in great numbers are the first victims to any poultry disease that comes along.

THE "OUNCE OF PREVENTION."—The ground location of a poultry-house must be well drained, either naturally or artificially, and the house itself must be well lighted, well ventilated, large enough to accommodate the desired number of fowls without crowding, warm in winter, cool in summer, and thoroughly clean at all times. The fowls are to be of healthy stock to begin with, and only the best kept over each year for next season's breeders. Fowls that are very much over or under size, those that seem "weakly like," and those that have recovered from an attack of roup, cholera, or any serious disease, should never be used as breeders. Let the food be fresh and wholesome and sufficient in quantity to keep the fowls in good condition. Under-feeding and over-feeding should alike be avoided. Shrunken grain may be used for poultry food, but musty and mouldy grain and sour meal should not be fed—especially in warm weather, and never unless it be well cooked. Keep pure water where the fowls can have access to it at all times, and the poultry house should never be without a supply of gravel, lime and charcoal. Fowls and chicks must be kept free from lice, but to accomplish this too severe remedies must not be used, especially upon chicks. Every year the old "lard, sulphur and coal oil" remedy for lice goes the rounds of the agricultural press, and it kills more chickens than it ever cured. When strange fowls are brought upon the premises, no matter if they come from the yards of some "noted breeder," keep them apart from the other fowls until you are sure they are all right. Do not dose your fowls with any of the preparations so extensively advertised to "keep fowls in good health." I speak from years of practical experience in caring for poultry when I say that fowls can be "kept in good health" from the time the chick leaves the shell until the grown fowl is "sent to pot" or to market, without administering one drop of medicine. Unless some contagious disease is present among the flock or in the immediate neighborhood, preventive medicines are worse than useless. Close attention to all the wants of the fowls, and also to the sanitary conditions of the house and yard, will do more toward preventing disease than all the poultry pills, powders, tonics, etc., in the universe.

THE "POUND OF CURE."—Long experience as the "family doctor" for all the poultry flocks in the neighborhood has convinced me it don't pay to fuss much with fowls that are really sick. In the *Prairie Farmer* of

July 5, T. D. B. says: "When a chicken is noticed to have anything wrong with it that we do not understand, it is immediately killed and buried very deep," and I can recommend his method as the quickest, safest, and surest way of doctoring sick fowls. As he says, you may kill chickens that would be all right in a few days, but the farmer or poultry-raiser who keeps fowls in large numbers can not afford to run the risk. When the disease is suspected or known to be roup or cholera, let the killing of the affected ones be followed by a thorough disinfection of the premises, and a daily use of disinfectants until several days after the disappearance of the last symptoms of disease.

—*Funny Field in Prairie Farmer.*

Water for Fowls.

One of the most important things in feeding poultry, yet too often neglected, is a supply of good pure water. A fowl drinks the first thing in the morning and fifteen to twenty times during the day, especially in hot weather, and mismanagement in this particular may damage seriously the health of the whole flock. Impure water is one of the most common sources of disease; it carries all kinds of germs. Cholera, for instance, is in all probability often due to the drinking of water that has drained from the stable or cow yard; roup is often communicated through the tainting of the drinking vessel, and so on. Too cold water chills and prevents digestion, acting directly on the sensitive cavity of the crop; lukewarm water in summer is not relished and is altogether unrefreshing. Snow-water is said to reduce flesh rapidly as a sharp attack of diarrhea, though this assertion has been disputed. Hard water is disapproved of by some breeders; it seems to disagree with horses.

The best thing in summer is to have a stream of running water, if possible, from a pure source, flowing constantly through the hennery. In winter it should be warmed, and with Wheeler's Drop Faucet there is no great difficulty in securing this. If the quality of the water is suspicious, boiling will often improve it, and where there is the slightest tendency to diarrhea or cholera it is advisable to boil it always. The water is a good medium for administering some tonics and stimulants and lime. A few rusty nails in the water vessel, or a few drops of the tincture of iron daily, or a bit of asafoetida fastened to it, are recommended.—*Poul. Yard.*

The Apiary.

How to Handle a "Queen."

To catch a queen the operator first puffs a little smoke into the entrance of the hive, waits a minute for the bees to fill themselves with honey, which smoke will cause them to do, and then carefully opens the hive. Being filled with honey, the bees are usually good natured, and will seldom sting unless pinched. A comb is carefully lifted out and each side closely scanned, and if the queen is not found, returned and another one removed. When the queen is found, she is carefully taken by the wings and put into the cage. Worker bees are then caught or caged in the same manner, it being impossible for them to sting when taken up by the wings. In warm weather, eight or ten workers are sufficient as an escort, but as cool fall weather approaches the number is increased until it sometimes reaches forty or fifty. The shipping of queens by mail has been reduced to so exact a science that they are not only sent across the continent, but across the Atlantic. At the time of the removal of a laying queen from a nucleus, or soon after, a matured queen cell or newly hatched queen is given to the nucleus, and the apiarist may be able, ten days later, to ship another laying queen from the same nucleus.—*Ez.*

Horticulture.

Horticultural "Fish" Stories.

The cause of true progress in Agriculture and Horticulture is frequently damaged by the extravagant claims of writers and speakers in regard to the great profits to be derived from the cultivation of certain crops. These writers and speakers hear of certain exceptionally great profits, and at once spread the statement abroad as the ordinary results to be obtained from the cultivation of these crops, thereby inducing men, ignorant of the first principles of Horticulture to invest their means in a business in which skill and experience are indispensable to success, and in which the most skillful seldom realize the fancy profits of which these writers talk so glibly. In this class I would place the address of Dr. J. W. Sanford quoted in your last No. Many of the statements contained in this address are so extravagant that I think it right to caution the inexperienced against placing too much faith in them. It is certainly true that in a favorable soil and location a skillful gardener can usually make fair returns for his labor and in time acquire competence and even wealth from a much smaller area than is usually required by the farm. But that a farmer without any previous experience in commercial Horticulture can suddenly take up a specialty in vegetables or fruits and make the profits named by Dr. S., or any profit at all, until he has paid for his experience, I do not believe. The Dr. starts out with a little ridicule of a man who had eighty acres of fruit land and yet only planted a half acre in red raspberries, while he might have gotten rich by planting half his land in this crop. But the man with the single crate of berries was right. He might have gotten rich by planting half his land in red raspberries, but in nine cases out of ten such a rash rushing into a specialty would have resulted in a sheriff's sale before the man learned how to grow and market his red raspberries to a profit. Then after ridiculing a man for not risking half his farm in an extremely perishable and uncertain crop, the Doctor winds up his address by warning his hearers against being "one crop" men, when the whole drift of his address is in favor of specialties. The man who cautiously plants a small area of any new crop until he learns just what he can do with it, even if he has to carry his crates on his shoulders to ship them, is a much wiser man and more certain of final success than the one who risks half his farm in a crop he has never grown before.

The great mischief which these recitals of great profits in horticultural specialties do is that they lead inexperienced men to suppose that these exceptional profits are the rule instead of being exceptions, even if many of them are not altogether apocryphal. For instance does any practical man believe that a poor man in Mass. really did make an income of \$5,000 per annum from the growth of dandelions on six acres of wet land simply by draining and digging and planting it. If such exceptional results were really obtained it was by covering the land with frames and sashes, a proceeding which no "poor" man could accomplish on six acres. So also of Mr. Bull's dandelion culture. He omits to state that the \$1.50 every month for four months from a space 3x6 feet was under a glass sash of that size. He says that this was at the rate of \$13,000 per acre, but does not state that an acre of land in frames involves the use of two more acres for alleys and road ways, so that it would really be \$4,333 per acre, and that to cover an acre with frames and glass would cost about \$7,500, while the cost of attention in winter, the breakage, etc., would make the culture in frames five times as expensive as in the open ground. That large profits can be and are made in gardening and fruit growing by men who have skill and experience in the business is true, but even with these the

large figures named by Dr. S. are seldom realized, while nine out of ten inexperienced men would utterly fail to make any profit at all. Dr. S. mentions the Maderia nut or "English" Walnut as a profitable tree. A friend of mine had a tree of these which brought him one season \$25 from the sale of nuts. At this rate an acre of these trees would have yielded \$1,000. This looks like it ought to be profitable, but the fact is that I knew that tree for over twenty years, and that crop of \$25 worth of nuts was the only one it ever yielded. So of a good many of these big stories of profit, if they were sifted and analyzed they would dwindle very much. The men who generally make a success in new crops are not those who rush in headlong and plant half their land in a specialty, but those who feel their way at first and gradually find out what they can do, even if they do have to carry their one crate of red raspberries on their shoulders to the station.

W. F. MASSEY.

A Bird Story.

A few months since, a contributor complained of the birds doing so much damage to his early berries. My paper has been misplaced, but I thought I recognized a highly prized friend, and I want to tell him a little story that came under my notice twenty years ago.

A neighbor had a very fine garden of strawberries, and having some friends in Baltimore, he had learned how to make his garden very profitable.

Well, beside my neighbor's garden, he had a fine lot of trees in his yard, and the robins, possibly with an eye to business, built a great many nests in these trees, and just as the berries began to ripen, the young birds began to chirrup for food, and for a day or two right royally did their proud mothers feed them from neighbor's berries.

But the neighbor was becoming exasperated, and used his shot gun with deadly effect, every time a mother robin alighted in his garden.

The little birds chirruped hopefully for a little while, but soon the heartrending notes of starving, helpless little creatures came, and soon there was silence! My friend gathered his berries in peace. He was a good man, and I wonder if he ever heard those little birds begging for food.

I shall have to pass that same way this evening, and I shall listen for the sound that I have never forgotten.

EASTERN SHOREMAN No. 2.

Berry Notes.

Another season's trial of the novelties in small fruits has left the impression upon my mind that we are making but slow progress towards reaching perfection in any variety as yet; the old standards are still the standbys with but one or two exceptions. To all who would rush into novelties we would say "go slow." There are enough old well-trying sorts to choose from, and there is no need to risk uncertainties. But as it is part of my business to test newer varieties I will give the result of my experience the past season.

Sharpless, Crescent, Wilson, Downing and Kentucky Late, held their own as usual; the only new comers which impressed me favorably were the Manchester and Bidwell. The last named is an early berry, ripening about with the Wilson. It is of good size but very irregular in form; more so than Sharpless. It requires good soil and should be grown in stools, all runners kept off, and mulched in winter, as it appears to be tender. It sets more berries than it can well mature, is of good color and quite firm. The Manchester has come to stay, its great fault is its lateness, coming on just before Kentucky Late. The berries are of large size from first to last, are firm, and of a lively bright color,

will prove an excellent shipper. Owing to its having been insufficiently fertilized by other sorts there was a large number of imperfect berries. Last season there were no imperfect berries among them as they received an abundance of pollen from other kinds near. Being a pistillate variety and blossoming so profusely, I would advise setting at least every third row with some strong staminate sort. It resembles the Cumberland Triumph in appearance, but is a much better berry every way. It is as productive as it is possible for so large a variety to be, approaching the Crescent in this respect. James Vick takes a back seat early in the day, being too small and trifling, except as a curiosity. By the way it starts to making blossoms, and caps, it leads one to expect that the berries will pile up in a little pyramid around and atop of each plant, but when picking time comes they are not there by a large majority.

Jersey Queen has but one or two good qualities; blooms after all others have quit and bears plenty of bright but soft berries. It would be a profitable variety to have should late frosts kill all the early blooming sorts.

Finch's Prolific is a very fine large berry of excellent quality, but seems to be a shy bearer.

Big Bob was scarcely visible. It is called "Little Bob" now. Longfellow did well on bottom land, and is a showy productive variety on such soil. Satin Gloss, Duncan, Nunam, and several others are laid aside for good. In the meantime we will wait for the one which is to combine all, or nearly all, the good qualities—it has not reached here yet.

R. S. C.

Harman's, Md.

Pears for Profit.

When swamp land has been thoroughly drained, worked and manured sufficiently to make it pay for market gardening, there is no doubt that dwarf pears will grow freely and thrive for a time on such a soil; but it should be constantly kept in mind and practically carried out, that the soil must be kept free from stagnant water and in good heart. It is also necessary that the trees be planted with care and judiciously pruned at the time of planting. If it were a question between upland and well-drained swamp land, the practical pear-grower would always choose the upland situation, other things being equal. There is always more or less danger of getting a late succulent growth of young wood on swamp land that is rich and moist, especially when the soil is fertilized with unfermented manures. Besides, there is something to be feared from late frosts while the trees are in blossom on such low, damp places. But these drawbacks are not formidable enough to prohibit planting pears with fair prospects of profit, provided a good selection of trees and varieties is made.

This brings us to the most important consideration in laying plans for planting a pear orchard—the choice between dwarfs or standards. To treat this question intelligently it will be necessary to refer briefly to the history of pear culture in this country. A quarter of a century ago the opinions which found their way into print on this subject, in nine cases out of ten, emanated from nurserymen, and the exceptions to this rule came from those who took their keynote from the same source. Now every practical man knows that it is much easier and very much cheaper to grow dwarfs in the nursery than it is standards. The uniform and rapid growth of dwarfs in the nursery, putting aside the larger profits, led nurserymen to advocate the planting of dwarfs in preference to standards for orchard purposes, and, as a consequence, dwarf pears were planted extensively in every section of the country, on the recommendation from the sources named.

As a matter of course, time and practical experience were essential elements to test this important question.

I was one of the thousands who were led to plant dwarfs on an extended scale, and now, with an experience of twenty-five years in growing pears for profit, and having during that time an unusual opportunity for observation, both in this country and Europe, I can speak with some authority on this subject. To be brief in summing the case, I will simply state that if I were about to plant a pear orchard now, and could get dwarf trees for nothing, and I was compelled to pay \$500 a thousand for standards, I would not hesitate a moment in making the selection of standards. The tempting theory that dwarfs will bear fruit in a couple of years from the time of planting is a dangerous and bad theory to practice. A pear tree should not be allowed to bear any fruit until it is five or six years in place; and in closing this brief article I will say that one healthy standard pear at twelve years of age is worth a dozen of dwarf trees kept as dwarfs at the same age.—P. T. Quinn, in N. Y. Tribune.

New Strawberry Beds.

The gardener who grows but a few strawberries for home use is quite apt to let the bed take care of itself after it has become an established institution. I know of many beds that are from five to ten years old, and the only care bestowed upon them is in pulling or mowing off the weeds that would otherwise bury the vines from sight. The berries are getting smaller and fewer every year, and soon they will be no better than the wild ones in the meadows.

In the first place, a bed should not be allowed to get into such a tangled, matted condition. I know it seems hard to go in and cut out a splendid growth of vines that is trying to occupy the ground space between the rows; but it must be done, and the boundary lines vigorously established and maintained, or the patch will quickly become unmanageable. Let each row have a strip about a foot wide, and then confine the plants to that by cutting out the remaining space between the rows each fall, after the season's growth is over. This leaves a chance for cultivation, and for working in manure about the rows. If the plants become too matted in the row, it is an easy matter to cut out narrow spaces with the hoe or other implement. Beds that are kept cut back in this way need mulching especially. A matted bed, with more or less weeds and grass on the surface of the ground, will furnish pretty much all the mulching needed of itself; but a patch that is kept well trimmed must be mulched, or it will suffer from the frosts and thaws of winter.

But beds will run out with the best of care, and should never be left more than three years, and many good growers advocate but two. If well cared for, I find that they will do as well the third year as the second, and I don't like to move any oftener than is really necessary. If the white grubs get into a patch, plow it up, if it has been in bearing but a year. Where these troublesome pests abound, beds will have to be renewed often, for every year the eggs of the beetle, from which come the grubs, will be deposited afresh. I think, too, that, unless very intelligently managed, a piece of ground will soon become exhausted in those particular properties demanded by the strawberry. Rotation of crops is as necessary here as elsewhere.

It is no great task to set out a bed large enough to supply an ordinary family. The ground should first be made thoroughly rich and mellow; then mark out the rows with a rake marker that will not press the earth down, but push it aside and leave a little furrow in which to set the plants. In setting out, a little care should be exercised in

spreading the roots somewhat before filling in and pressing down the earth. I have noticed many in setting out such plants "chuck" them down in a little bunch, or with the roots all hanging off to one side, just as they happen to come.

Early in the fall is a good time for setting out strawberry plants, provided it is not too dry. Set them out as soon as the weather is moist enough, and they will get a good start before cold weather sets in. Then, if they are well mulched, they will stand the winter in good shape. There is usually more time for such work in the fall than in the spring, and the ground is in better condition to work.

There is no fruit more easily grown than the strawberry. It is just the fruit for those to grow who have only a limited amount of space at their disposal. Every garden, whether on the farm or in the village and town, should have its strawberry bed.—W. D. Boynton, in American Garden.

Ripening and Marketing Pears.

As soon as pears have attained their full size, and will part readily from the stem when raised by the hand, they should be gathered. They should be handled as carefully as eggs. In order to ripen them properly, spread one or more blankets in a room from which the light is excluded as much as possible, put the pears thereon and cover them with a blanket or blankets, and in a few days they will be ready for the market or home use.

In packing for market put all except the extra specimens in crates and half-barrels. The extra specimens that are to be disposed of should be put in shallow boxes, after each one is wrapped in fine, white, soft paper. These boxes are usually only deep enough for a single layer of pears. One thing should be taken into consideration, that is, the early varieties mature quicker after they are gathered than the late ones. If the pears are to be shipped to market they should be assorted into extra and first-class lots, leaving the inferior ones for immediate use at home, as there is really no demand whatever for pears of poor quality.—Cor. Grange Bulletin.

The Grange.

An Address delivered before All Hallow's Grange, No. 14, P. of H., July 26th, 1884.

BY THE REV. D. A. BONNAR, W. CHAPLAIN.

Worthy Master, Brothers and Sisters of the Patrons of Husbandry:—

"Some men are born to honors, and some have honors thrust upon them!"—is a trite saying and a true one. Certainly I should not have ventured to seek the honor conferred upon me in the resolution of All Hallow's Grange, which calls me to the duty I shall now attempt to fulfil. I say "attempt," because it is with no small measure of hesitancy that it is undertaken, by one who realizes, only the more deeply as he approaches the doing of it, his ill-fittedness for the task, both as to any inheritance of ability in this particular line, and any preparation for it by practice or training.

I am glad to listen and learn here in our Grange sessions; to listen to the expression of diverse opinions and experiences, to wise suggestions, and practical solutions of often perplexing and difficult problems; to learn lessons that are of far more passing value or interest, lessons that go deeper than the plow or spade, and that well applied must bear fruit of more real and lasting benefit than the improvement of a cereal crop, a heavy fleece of wool, or weighty beef or pork. Glad am I to listen and learn, only trusting that sometimes an inquiry growing out of my own ignorance or inquisitiveness may aid in drawing from able teachers a

Resolved, That a copy of these resolutions be sent by our Secretary to the family of deceased, to the county papers, THE AMERICAN FARMER, and spread upon the minutes of this Grange.

ANNIE W. STEVENSON,
ANNIE E. TALBOTT,
CLARA W. HEILIG,
W. F. MASSEY,
Committee.

Home Department.

A Visit to Mt. Vernon.

(Concluded.)

In a small room on the left of the hall, marked "Mrs. Washington's Sitting Room," Washington wrote an account of the battle of Monongahela to his brother, the only reliable one we have of that engagement. After the battle the Indian chiefs had an interview with the General under the four old trees of which we have spoken.

At that time an Indian warrior told how many times he had fired at the American patriot, and always missing aim.

In this room, also, was penned the farewell address to his countrymen. The room in which Washington died is preserved as far as possible intact, the plain old-fashioned four posted bed with hangings stands in its place, and in a small room or closet adjoining are camp equipages, medicine chest, etc. An empty trunk is on the floor near the fireplace, but the journeyings of the patriot and hero are ended.

In an attic room, the plainest in the house, with dormer window and slanting roof, Mrs. Washington died, just eighteen months after her illustrious husband.

The reason given for her choice of this apartment was, that from it only she could see the first vault in which Washington was laid.

One contrasts the manly devotion of the American hero and its appreciation with the heartless conduct of Napoleon to Josephine.

But the two men should not be named together. We can hardly repress an expression of disgust on being told that the weeping willows in the ravine which extends from the landing along the path to Washington's tomb came from Napoleon's grave.

It is well to take our children to a place like this, and as they stand with uncovered heads before the remains of departed worth, impress on them the lessons which such a life teaches, with the distinction between great abilities and purely selfish personal ambition, and self sacrifice and devotion to principle and country.

It has been somewhat difficult to get to Mt. Vernon, involving a journey to Washington, and the "looking up" a boat from thence. But the weekly excursions, on the Baltimore and Ohio, involve no such delay. After a charming ride of forty miles past the Relay, with its exquisitely kept foliage and flower beds, the cars stop within a few feet of the "Mary Washington," which, after a sail of seventeen miles on the Potomac, lands passengers at the little wharf which is but a few hundred yards from the vault itself.

Several hours may be spent on the grounds, and the visitor finds himself in Baltimore at tea time. A chamber in the crypt under the Capitol was prepared for Washington's body, and efforts have twice been made to gain the consent of the owners of Mt. Vernon to its removal. This was refused, and in the first instance by Mrs. Washington. In his will the General directed that a new vault of brick should be built, and his remains placed in it. It was not done, however, until thirty years later, when an entrance had been forced into the vault, which is low and oven-like, and a skull stolen. In the sealed vault in the rear of the present enclosure rest the remains of some thirty of Washington's relatives. The key of the vault was then thrown into the Potomac.

Mrs. J. B. MOORE BRISTOL.

The American Farmer

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'AGRICOLAS.' Virg.

PUBLISHED ON THE 1ST AND 15TH OF
EVERY MONTH.

By SAMUEL SANDS AND SON,

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BALTIMORE, MD.

WILLIAM B. SANDS, Proprietor.

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WM. B. SANDS, }
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*. Subscribers who have minerals, ores, marls, fertilizing materials, or other substances, will be advised through our pages, by competent chemists, as to their composition, uses and value, by forwarding specimens to this office, *expressage or postage prepaid*. Questions as to application of chemical science to the practical arts will also be answered.

*. Persons desiring information or advice on diseases or injuries of domestic animals, will receive replies from a competent veterinary surgeon, by giving a plain statement of the symptoms, etc.

At the office of THE AMERICAN FARMER are located the offices of the following organizations, of each of which its proprietor, Wm. B. Sands, is secretary:

Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, F. of H.
Agricultural Society of Baltimore Co.

BALTIMORE, AUGUST 15, 1884.

Condition of the Crops.

The department of Agriculture report the condition of the cotton crop improved in Virginia, Tennessee, Mississippi, Louisiana and Arkansas. The improvement is especially manifest in Mississippi and Louisiana. In North Carolina and Georgia the average status is unchanged since the July report. In South Carolina, Florida and Alabama, excessive rains have caused a weedy growth and shedding of forms, and prevented cultivation. In Texas, the drouth caused a loss of one point and raised serious apprehensions for the future. The plant is late and deficient, as yet, in fruitage. The average of the condition has advanced from 86 to a little above 87. The state averages are: Virginia, 88; North Carolina, 87; South Carolina, 91; Georgia, 90; Florida, 97; Alabama, 92; Mississippi, 89; Louisiana, 85; Texas, 79; Arkansas, 87; Tennessee, 92. Advances since the first of the month indicate an improvement from seasonable rains in Texas. The condition of corn averages the same as in the July report, and higher than in any August since 1880. The averages of the principal states are: New York, 91; Maryland, 94; Virginia, 95; North Carolina, 97; South Carolina, 94; Georgia, 97; Alabama, 99; Mississippi, 90; Louisiana, 78; Texas, 83; Arkansas, 90; Tennessee, 99; Pennsylvania, 90; Kentucky, 91; Ohio, 81; Indiana, 94; Illinois, 92; Iowa, 100; Missouri, 102; Kansas, 101; Nebraska, 105. The report for wheat includes only the spring wheat region. The average is 98 higher than in any year since 1877. The average condition of oats is 94, one point higher than in 1883. The crop has been harvested in the lower latitude, and promises a fine yield in the northern states. Rye averages 97, the same as last month, as harvested and ripened. Barley also maintains its high condition, and buckwheat promises as

full a crop, on an area about the same as last year. Tobacco promises a large crop. The averages are: Massachusetts, 85; Connecticut, 92; Pennsylvania, 83; Maryland, 102; Virginia, 97; North Carolina, 99; Tennessee, 103; Kentucky, 97; Ohio, 94. The prospect is favorable for another large crop of potatoes, not as full as last year, on an area three per cent. smaller. The present indications point to ten per cent. less than 1883.

Received.

PRACTICAL FORESTRY.—A treatise on the propagation, planting and cultivation, with a description and the botanical and popular names of all the indigenous trees of the United States, etc.—By Andrew S. Fuller. Orange Judd Co., N. Y.

This is a handy and timely little volume on a subject that must grow in interest as the years go by. "The importance of not only preserving the forests we now possess, but also the necessity of planting new ones" will be readily acceded to by every thoughtful mind. It calls for the co-operation alike of the individual land-owner, the State, and the general government, and until such time as all three interested become thoroughly alive to their responsibility in the matter no adequate movement looking to the desired end is to be expected. But this book will educate, and those who contemplate tree planting will go all the more intelligently to work after a thorough perusal of it. Those, on the other hand, who have never given the matter a serious thought, may be led to regard tree planting as a duty and privilege after having read the opening chapters, where the influence of forests on climate and various other kindred subjects are discussed in a most sensible and convincing manner.

The directions for raising trees from seed, buds and grafts, as well as their cultivation, transplanting, pruning, etc., are all thoroughly practical and modern in their application, and will well repay perusal even by many whose previous knowledge of such matters has been allowed to rust, to say nothing of those who are as yet but tyros in the business.

By far the larger part of the book is devoted to a descriptive list of our native trees, both deciduous and evergreen, together with many useful remarks concerning their propagation, economic value, etc.; also much information with regard to exotic species.

There are chapters on "The importance of a supply of wood," "Preservation and management of forests," "Establishing new forests," and many others of equal interest.

The work as a whole is well arranged and contains all the information that the practical forester really requires.

THE SHORT HORN BULLS offered for sale by Mr. Norris, are well bred animals, and the prices named are low enough to tempt a farmer to buy, for the improvement of herd of natives or grades.

Notes from the Eastern Shore.

A Talbot County Farmer writes us: "My sheep show marked improvement, having averaged 74 pounds of wool, an increase from a 3 pound average; and I sold the lambs at \$4.75, and the culls at \$3.33, which indicates their condition. Having decided to put a Cotswold cross in them to increase the yield of wool—nothing under 10 pounds will satisfy me—I got a buck lamb from Mr. Legg, of Kent Island, last fall, which gave me 17 pounds of wool and weighed 140 pounds after shearing; I now have him running with fifteen selected ewes, and next year will give him the whole flock.

"The yield of wheat this year has been quite exceptional. I have not threshed yet, though I have hauled my wheat in and put it away, but am quite sure of getting about 30 bushels to the acre from 80 acres of corn ground and stubble fallow, and would have

made a much higher average but had about 18 acres of my poorest land, in which will cut me down.

"The hay this year is only a very moderate crop. I doubt if I have harvested much over a ton to the acre, except with orchard grass; this is, so far as my experience goes, very much the best grass for this section, as it matures before our dry season sets in; I have just put in 8 acres more of it, mixed with clover, timothy and a little blue grass, and the fine rain of the last few days ought to secure me a stand; if it gets hot and dry, I will cover it over entirely with old straw, as I treated some last year with great success.

"All the early fruits have gone, though I have a few cantaloups still, and plenty of melons, apples and pears; the peaches, by the way, are a complete failure; I can only get a few at a time, and those very indifferent.

"Put in corn this year with a Keystone Drill, 3 ft. 9 in. by 1 ft., and am satisfied I will get a heavy yield for this section, as it is a dark, rich green, well advanced, and more ears to the stalk than I have ever had."

Green Peas in Autumn.

Mr. Watson asks about fall-sown peas in your last number. I have found them rather uncertain, but well worth planting, when one has a vacant spot. Here, we usually try to have peas every month from June 1st to the middle of November, with the exception of the month of September and part of August and October. We now, August 6, have Yorkshire Hero and Blue Imperial in fine condition for the table; these are our sixth crop, beginning June 1st with Carter's Premium Gems, since which time we have had no break in the supply. Last year I sowed in September Carter's Gem and Laxton's Long Pod; the first named did well, but the last came on very slowly and finally most of the pods froze up on the vines. I should use for fall planting the Gems only, making two sowings in September.

I have seen it stated that the late crop of peas will do best if sown in a trench, so as to retain the moisture, the earth being gradually filled in as they advance in growth; this might be worth trying by those who have time for such experiments.

W. F. MASSEY.

Thinning Fruit.

Not one fruit grower in twenty realizes the importance of thinning fruit, and not half of those who do have the courage to pick off the amount of fruit required to be taken off to secure the best results.

The moment one not thoroughly hardened to the business, begins to pick off partially grown fruit, he has doubts as to which specimens are the largest and best, and usually as soon as a specimen is severed from the tree it looks much larger and better than any that are left; so the mind of the orchardist is kept in an unpleasant state while he is engaged in the work of thinning his fruit, until he has had practice enough to become hardened to the business; then he can go into the pear orchard and slash right and left, removing one half, or three fourths of the fruit, and feel that he is doing his duty.

It should be kept in mind that if by picking off one half of the fruit, the other half grows to twice the size, there is not only no loss in measure, but a gain in quality, which will often double its value. There is another advantage of reducing the number of specimens, which is often entirely overlooked; it reduces the draft on the tree, there not being so many seeds to mature, these exhausting the tree to a much greater extent than the flesh that covers the seed.—Mass. Ploughman.

WHEAT sold in the Baltimore markets within the past week lower than for many years.

Baltimore Markets—August 15.

Flour.—The market is dull. We quote: Howard Street and Western Super, \$3.97@3.75; do. do. Extra, \$3.00@3.25; do. do. Family, \$4.00@5.00; City Mills Super, \$3.90@3.00; do. Extra, \$3.15@3.75; do. (Rio brand) Extra, \$5.00; Baltimore Winter Wheat Pat, \$5.25; do. High-grade Family, \$5.75; do. 2d-grade Extra, \$5.50; do. Third-Grade Extra, \$5.25; Fine, \$3.00@3.25; Rye Flour, \$3.75@4.00; Corn Meal 7 100 lbs., \$1.00@1.25; Colbert's Excelsior Graham, \$7.

Wheat.—The inquiry for Southern is less active and the market is quiet and lower. Good to choice cargoes sold at 85@88 cts. for Fultz and 90@92 cts. for Longberry, and bag lots at 85@87 1/2 cts. for good to prime and 75@77 cts. for common. The market for Western opened fairly active and irregular, but closed more steady at or near the best prices of the day. The closing quotations were at 87 1/2@87 3/4 cts. for spot, 87 1/2@87 3/4 cts. for August, 86 1/2@84 1/2 cts. for September, and 90 1/2@90 3/4 cts. for October.

Corn.—The market for Southern is dull and lower, with very moderate inquiry. White sold at 80@87 cts. for blue-eyed and inferior, and 68 cts. for prime, and yellow at 64 cts. for good and 64 1/2 cts. to grade. For Western the supply and demand are alike limited, and the market is dull and purely nominal in the absence of business.

Cotton.—Buyers and sellers are equally indifferent, and the market is dull and nominal in the absence of recent business. We quote as follows: Middling at 10 1/2 cts., low middling at 10 cts., and good ordinary at 9 1/2 cts.

Hay and Straw.—New hay is arriving more freely, and the market is dull and easy for all except prime grades. We quote as follows: New Cecil-county Timothy at \$18@19 per ton for choice, and \$16@17 for good to prime. Clover at \$10@12, and Western at \$14@17. Fair to prime old stock is worth \$17@20. Straw is steady at \$8@9 for Wheat, \$11@12 for Oats, \$12@14 for long Rye, and \$11@12 per ton for short do.

Mill Feed.—The market is quiet and about steady with moderate demand. City Mills middlings sell at \$17 1/2 ton and Western bran is quoted at \$15.50@16.00 for coarse, and \$19.50@21.00 for fine.

Live Stock.—**Beef Cattle.**—The market has been fairly active to-day. Prices of Beef Cattle ranged as follows: Best, \$5.24@6 00; that generally rated first quality, \$5.50@6 00; medium or good fair quality, \$4.00@5.75; ordinary thin Steers, Oxen and Cows, \$3.50@4.00. Extreme range of prices, \$3.50@6.02 1/2. Most of the sales were from \$4.25@5.57 1/2 per 100 lbs.

EVERY MAN HIS OWN MILLER.

ECLIPSE POWER WIND MILLS,

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TWO SHORTHORN BULLS.

"BUPERT,"—Red; calved June 30, 1890; bred by S. S. Bradford, Esq., Culpepper, Va. By Earl of Belleview; a straight Bates Rose of Sharon, (sired by Earl of Welden, 3235, S. E. B.; 1472 A. S. H. B. Dam Elvina 8th, 4117 Plantagenet 8795. Second dam Elvina 3rd, 1890; 11th Duke of Devonshire, 5611 Third Dam Elvina, 813 Duke of Geneva (1864-4.) Dam Red Rose 8th, by Taurus 3235. Price \$125.

"MARY'S KIRKLEINGTON PRINCE"—Red and white; calved January 15th, 1888. Bred by E. B. Emory, Centerville, Md. by Kirkleington Lad 28600. Dam Sharon Belle 3rd 6167. Belle Sharon 2nd 37081. Price \$150.

AND ONE BULL CALF, ROAN, BRED BY ME. Calved March 6th, 1894, by Kirkleington Lad 28600. Dam Catherine Princess by Emory's Roan Duke 32078. Price \$50.

Tanis Mills, Md. OWEN NORRIS.

Butter.—Under an active inquiry for choice stock, the market is quite firm, with moderate offering. Common grades are dull and neglected. We quote choice New York State at 20@21 cts.; fresh western packed choice at 15@16 cts.; do. good to prime at 12@14 cts., and near-by receipts at 19@15 cts. 7 1/2.

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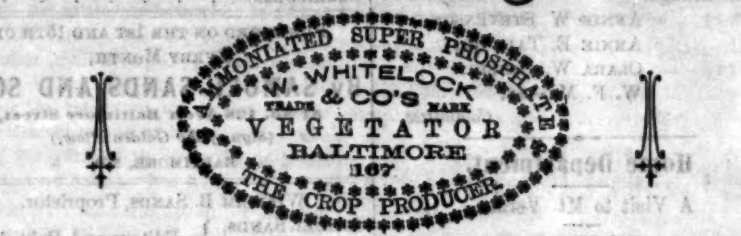
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If you desire a lower price manure, which is the cheapest and best for the money, purchase our

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The above brands are sold and delivered, 12 bags to the ton, and in fine and dry condition for drilling. EXTRA MOISTURE IN A FERTILIZER ADDS TO THE COST.

You should count the cost of the Fertilizer by the cost per acre. As the soil requires more of a lower grade fertilizer to the acre than one of a higher grade, the consequence is that the extra quantity required, the extra labor in applying it, and the poor results obtained, make the lower grade of goods more costly. With perfect confidence we refer buyers to all who have applied our Fertilizers.

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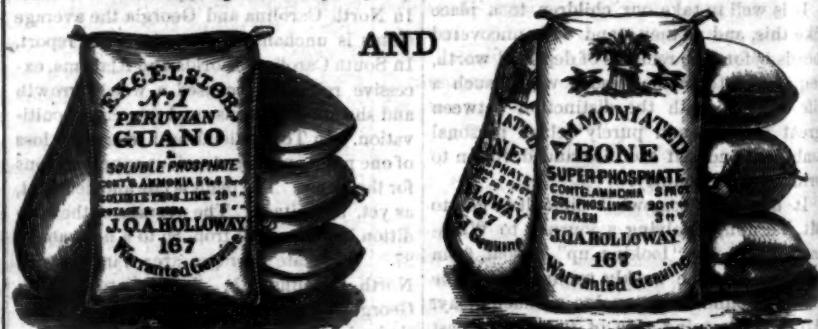
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For growing Wheat, it is the universal opinion of the farmers of Maryland and Virginia, after over twenty-six years experience in the use of these FERTILIZERS, that an application of 100 pounds is equal in its effects to 300 pounds of any other Fertilizer or Guano, therefore fully 50 per cent. cheaper.

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By strictly adhering to my Original Formulas, using only the most concentrated materials, and superintending in person their manufacture—as for the past TWENTY-FIVE YEARS.

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Jersey Queen, James Vick, Manchester, Bidwell, Finch's Prolific, and most of the old standard varieties of STRAWBERRIES, RASPBERRIES, GRAPES, &c. Send for Price List, also my \$5.00 offer of assortment of each. Am also breeding a choice lot of P. Rock fowls, trice \$5, Eggs \$1.50 per 13. Address

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Single Bag of 200 lbs. \$1.50. Per Ton \$12.00.

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Our stock of Seeds are new and true to name, embracing all the valuable varieties, and are from the most reliable growers only. Thankful for the commendation and increased patronage which have crowned our efforts to supply the best seed in the market, we will strive to merit confidence.

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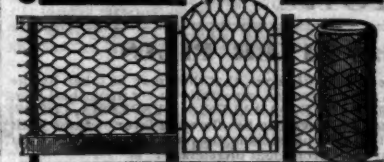
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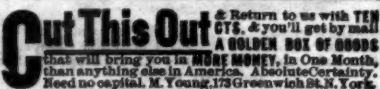
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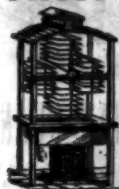
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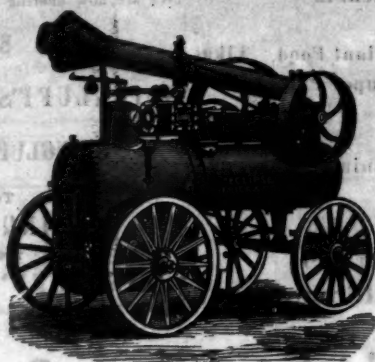
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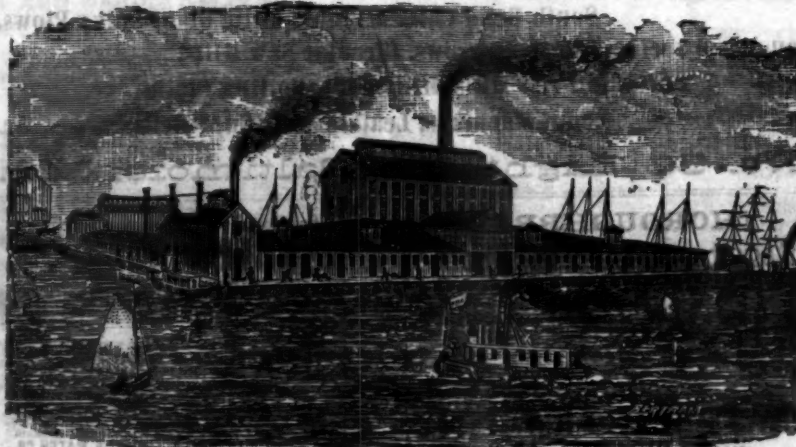
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